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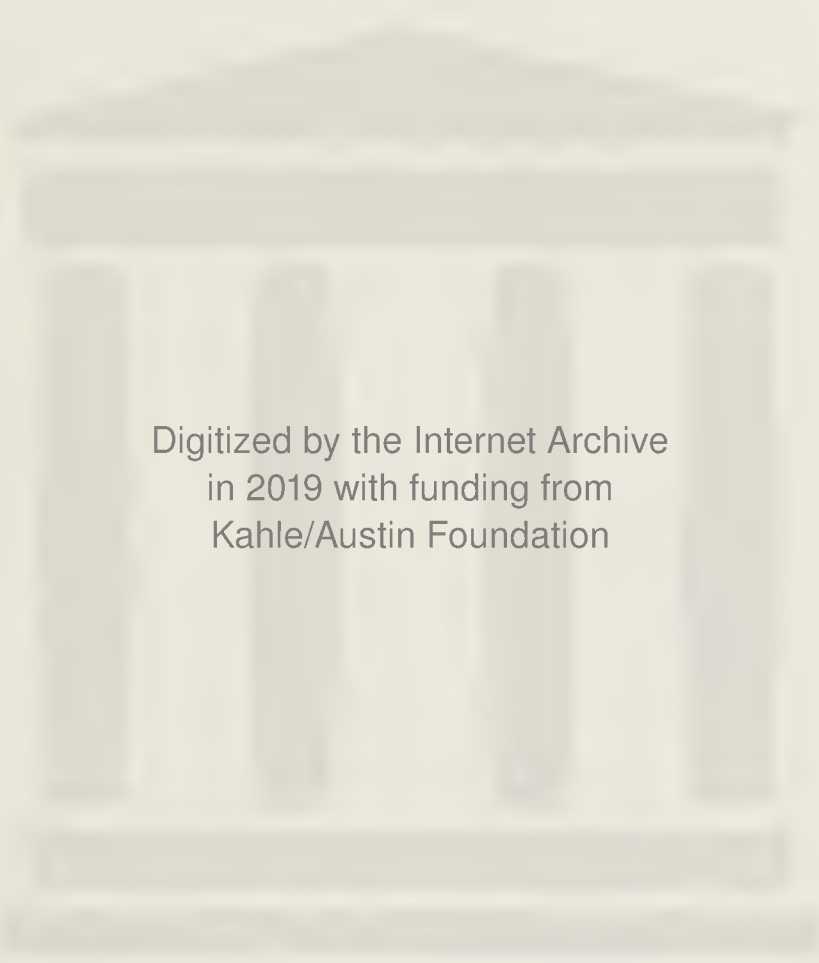
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Sixty-fifth Annual Report

of the

BUREAU OF AMERICAN
ETHNOLOGY



1947-1948



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SMITHSONIAN INSTITUTION

WASHINGTON

D. C.

SIXTY-FIFTH
ANNUAL REPORT OF THE
BUREAU OF
AMERICAN ETHNOLOGY
TO THE SECRETARY OF THE
SMITHSONIAN INSTITUTION

1947-1948



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BUREAU OF AMERICAN ETHNOLOGY

Director.—MATTHEW W. STIRLING.

Associate Director.—FRANK H. H. ROBERTS, JR.

Senior ethnologists.—H. B. COLLINS, JR., JOHN P. HARRINGTON, W. N. FENTON.

Senior anthropologists.—G. R. WILLEY, P. DRUCKER.

Collaborators.—FRANCES S. DENSMORE, JOHN R. SWANTON, A. J. WARING, JR.

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Librarian.—MIRIAM B. KETCHUM.

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INSTITUTE OF SOCIAL ANTHROPOLOGY

Director.—G. M. FOSTER, JR.

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RIVER BASIN SURVEYS

Director.—FRANK H. H. ROBERTS, JR.

Archeologists.—J. JOSEPH BAUXAR, WESLEY L. BLISS, JOSEPH R. CALDWELL, GEORGE L. COALE, PAUL L. COOPER, ROBERT B. CUMMING, JR., RICHARD D. DAUGHERTY, FRANKLIN FENENGA, JACK T. HUGHES, MARVIN F. KIVETT, CARL F. MILLER, CLARENCE E. SMITH, RALPH S. SOLECKI, ROBERT L. STEPHENSON, JOE BEN WHEAT, ARNOLD M. WITHERS.

Paleontologist.—THEODORE E. WHITE.

SIXTY-FIFTH ANNUAL REPORT OF THE BUREAU OF AMERICAN ETHNOLOGY

M. W. STIRLING, *Chief*

SIR: I have the honor to submit the following report on the field researches, office work, and other operations of the Bureau of American Ethnology during the fiscal year ended June 30, 1948, conducted in accordance with the Act of Congress of June 27, 1944, which provides “* * * for continuing ethnological researches among the American Indians and the natives of Hawaii and the excavation and preservation of archeologic remains. * * *”

SYSTEMATIC RESEARCHES

Dr. M. W. Stirling, Director of the Bureau, spent the first part of the fiscal year in Washington attending to administrative duties and in preparing a study on “Olmec Jade.”

On January 1 Dr. Stirling left for western Panamá where he spent 3½ months in the excavation of four archeological sites on the Azuero Peninsula in cooperation with the National Geographic Society. Two of these were representative of the relatively late Coclé culture. A third was a mound site representing a new culture apparently ancestral to Coclé, while the fourth site was a shell mound near the mouth of the Parita River, which was found to contain a very early and completely new culture, unrelated to anything heretofore known in Panamá. During this work Dr. Stirling was assisted in the field by Dr. Gordon Willey of the Bureau staff.

At the close of the archeological field season a brief visit was made to the Guaymí Indians in the Province of Chiriquí.

Dr. Frank H. H. Roberts, Jr., Associate Director of the Bureau and Director of the River Basin Surveys, was mainly occupied throughout the fiscal year in directing the River Basin Surveys. In connection with this work he established cooperative projects with State and local institutions in various parts of the country, aided in the preparation of preliminary reports pertaining to the results of investigations in various reservoir basins, and wrote progress reports for the cooperating agencies. He went to Lincoln, Nebr., November 26 to December 5, where he inspected the field headquarters and laboratory for the Missouri Basin project, received reports on the results of the summer's surveys in that area, and aided in the preparation of plans for evaluating and handling the material collected. While in Lincoln he attended sessions of the Fifth Plains Conference for Archeology and presided at a symposium on “The Paleo-Indian in the

Central Plains." He also took part in a regional conference of National Park Service officials at which various phases of the River Basins program were discussed and plans for the future were formulated. In May he went to Milwaukee, Wis., to attend the annual meeting of the Society for American Archeology and presided over a symposium on "The River Basin Archeological Surveys." Dr. Roberts' report on the River Basin Surveys appears in another section of this report.

Dr. John P. Harrington, ethnologist, was occupied at the beginning of the fiscal year in the preparation of a supplement to his recently completed Aleutian grammar. This supplement contains a long list of terms relating to natural history, weather, material cultures, sociology, religion, and geography. Following this Dr. Harrington completed a grammar of the Maya language consisting of 750 type-written pages. This study is of particular importance, as Maya is one of the "classic" languages of aboriginal America.

Dr. Harrington then prepared and brought to completion a grammar of the Cahuilla language. The Cahuilla Indians are at present the leading native tribe of southern California. A large report on the Guaraní language of South America was also finished. Guaraní in the Republic of Paraguay has been given equal official and legal standing with Spanish. This is the only instance in which a native Indian language has been given a true literate status. A smaller paper on the Matakó language of the central part of the Gran Chaco of Argentina was next completed. It was found that in many respects this language is surprisingly similar to Guaraní. Another large paper was then prepared, describing and discussing the three principal ideographic writing systems of the world, Egyptian, Chinese, and Maya.

Dr. Henry B. Collins, Jr., ethnologist, spent the period from June 19 to August 16 on Martha's Vineyard, Mass., engaged in an archeological survey of the western end of the island. He found a number of prehistoric Indian village and camp sites, mainly in the Chilmark-Menemsha-Gay Head region, and made collections of artifacts. On returning to Washington he resumed his Eskimo studies.

As chairman of the Board of Governors of the Arctic Institute of North America, Dr. Collins continued to devote considerable time to the affairs of that organization. In the course of the year the Arctic Institute, with increased support from governmental and other sources, expanded its research and other activities. It opened a New York office at the American Geographical Society headquarters, established an open membership, and began publication of a journal. It sponsored and administered a number of field studies in anthropology, botany, zoology, geology, and geography. These projects carried out

in Alaska and northern Canada were financed in large part by the office of Naval Research and the Canadian Government.

Dr. Collins continued to serve as chairman of the Directing Committee for the Arctic Institute's Bibliography and Roster projects. This committee selected personnel and put into operation these two projects—the preparation of a comprehensive annotated and indexed bibliography on the Arctic, and a roster of Arctic specialists. The projects are supported by funds from the Office of Naval Research, the Army, and the Defense Research Board of Canada. The bibliography project, with four expert bibliographers and three assistants, is under way at the Library of Congress; the roster project, with a director and assistant, has been given office space in the building of the Carnegie Institution of Washington.

At the invitation of the Canadian Government, Dr. Collins left Washington late in June to conduct archeological work for the Smithsonian Institution and the National Museum of Canada in the northern part of the Canadian Arctic Archipelago.

At the beginning of the year Dr. William N. Fenton was on leave while teaching in the summer session of Northwestern University (June 23 to August 23), where he was invited to occupy the post of professor in the department of anthropology during that quarter. While in the Chicago area, he was able to spend considerable time examining rare books and manuscripts in the Ayer Collection of the Newberry Library and to study ethnological collections from the Iroquois Indians in the Milwaukee Public Museum and in the Chicago Natural History Museum. Returning, Dr. Fenton spent the first 2 weeks of September at field work among the Seneca Indians of Alleghany Reservation in western New York.

Teaching a course in primitive political institutions suggested a plan for undertaking a comprehensive political history of the League of the Iroquois which would attempt to test the findings of ethnology in the historian's traditional materials. The documentary materials on the Six Nations comprising the Iroquois League for the Federal Period alone and for the succeeding first decade of the nineteenth century exist in several large collections of papers which have not been used extensively by historians of Federal and Indian political relations. First, the papers of Samuel Kirkland (1741–1808) contain interesting sidelights on the political activities of the Six Nations, covering missionary activities among the Oneida, Tuscarora, and Seneca tribes; the correspondence of an agent of the American Revolution; and the gradual civilization of the native Indians. Examination of the Kirkland papers at Hamilton College was begun in September with the help of M. H. Deardorff of Warren, Pa., and Charles E. Congdon, an alumnus. The project is indebted to Dr. Arthur C. Parker of Naples, N. Y., for the loan of a Seneca Census of

1840 and several minute books of the Six Nations Council at Buffalo Creek by the New England missionary Rev. Asher Wright; these have subsequently been acquired by the American Philosophical Society.

Two grants were received for Iroquois research. Toward the collection of materials for a political history of the Iroquois the American Philosophical Society made a grant for travel, photoduplication, and secretarial assistance; and a similar grant was received from the Viking Fund, Inc., for field work.

Beginning in February, Dr. Fenton spent about 1 week of each month in travel to repositories of historical materials. He visited Salem and Boston to examine the Timothy Pickering papers, working in the Essex Institute and the Peabody Museum of Salem, and the Massachusetts Historical Society and the Houghton Library of Harvard in the Boston area. Frequent short trips were made to the library of the American Philosophical Society, Philadelphia, to examine parallel papers and to identify a Constitution of the Iroquois Confederacy by Seth Newhouse. In April Dr. Fenton went back to Hamilton College for further work on the Kirkland papers, and returning, he stopped at Vassar College library to arrange for copying the Jasper Parrish papers. Kirkland, Pickering, and Parrish were all concerned in negotiating treaties with the Six Nations after the Revolution, and their letters led to the immense collection of mementos relating to western New York which Henry O'Reilly of Rochester had collected in 15 large folio volumes for presentation to the New York Historical Society. By the end of June Dr. Fenton had completed a first examination of the O'Reilly papers and had arranged for microfilming a substantial part of them. A policy of collecting as much as practicable on microfilm has cut down the cost of travel.

Dr. Fenton completed a term as senior editor of the *Journal of the Washington Academy of Sciences*. In June he was appointed anthropologist member of the Language Panel of the United States National Commission for UNESCO.

A second album of Iroquois records with program notes, edited by Dr. Fenton, entitled "Seneca Songs from Coldspring Longhouse," was published by the Library of Congress.

Dr. Philip Drucker, anthropologist, was detailed to the River Basin Surveys July 1 to October 1, 1947, for work in the Columbia Basin. He returned to Washington on October 1, and during the ensuing months he brought to completion an ethnographic monograph entitled "The Northern and Central Nootkan Tribes," based on field investigations which he had made among the Nootkan-speaking Indians of Vancouver Island, British Columbia, some years before. This report describes in detail mode of life and customs of these Indians during the closing decades of the nineteenth century and is to be followed by a study tracing the cultural changes produced by European contacts

during the maritime fur trade a century earlier. On finishing this report, he completed an archeological monograph, "La Venta, Tabasco: A Study of Olmec Ceramics and Art," which summarizes the principal results of the studies made by the Smithsonian Institution-National Geographic Society expeditions to southern Veracruz and Tabasco, Mexico. In addition, he prepared two short papers for publication—"Preliminary Account of Archeological Reconnaissance on the Chiapas Coast," and one entitled "The Antiquity of the Northwest Coast Totem Pole"—as well as summary reports for the Director, River Basin Surveys, on the results of investigations of 14 reservoir areas in the Columbia Basin and of 10 in California during the preceding field season.

On May 2 Dr. Drucker proceeded to Boston and Salem, Mass., to examine collections of manuscript materials and museum collections from the period of the maritime fur trade on the Northwest Coast, in the archives of the Massachusetts Historical Society and in the Peabody Museum, Salem. Through the courtesy of officials of those institutions, he was given access to the collections and was able to assemble a considerable amount of unpublished data relating to the problem of culture change due to early European influences. On May 9 he returned to Washington.

On May 13 he was again detailed to the River Basin Surveys and left for the Pacific Coast, to resume charge of the River Basin Surveys work there. He was occupied with these duties at the end of the fiscal year.

Dr. Gordon R. Willey was detailed to the River Basin Surveys for the period August 15 to October 1, 1947, for work in Tennessee.

In the month of October Dr. Willey was occupied in writing additional sections of a report, "Ancon and Supe: Formative Period Sites of the Central Peruvian Coast." This paper is being prepared in conjunction with J. M. Corbett and L. M. O'Neale and is to be published under the auspices of Columbia University. In November and December full time was devoted to a long monograph "Archeology of the Florida Gulf Coast." This involved both writing and a museum survey in late November. Collections were examined in Cambridge, Andover, and New York.

On January 1, Dr. Willey accompanied Dr. Stirling to western Panamá for 3½ months of archeological excavations in Herrera Province. Four sites were examined and stratigraphic tests made in the most promising locations of each. May and June, following the return from Panamá, were occupied with writing the "Archeology of the Florida Gulf Coast." This report should be completed early in September 1948.

In addition to regular research duties, Dr. Willey has attended two meetings of the Institute of Andean Research, of which he is a

member, and a meeting of Florida archeologists held early in August at Daytona Beach. He has also served as assistant editor to *American Antiquity*, to the *Handbook of Latin American Studies*, and to the *Journal of American Archaeology*. For all these journals his work has entailed the covering of recent South American archeological literature.

In the Bureau he has acted as consultant during the final editing of the third and fourth volumes of the *Handbook of South American Indians*.

The following articles were prepared by Dr. Willey for publication during the year 1947-48: "Culture Sequence for the Manatee Region of West Florida," *American Antiquity*, vol. 13, No. 3; "The Cultural Context of the Crystal River Negative Painted Style," *American Antiquity*, vol. 13, No. 4; "A Proto-type of the Southern Cult," *American Antiquity*, vol. 13, No. 4.

SPECIAL RESEARCHES

Miss Frances Densmore, collaborator of the Bureau, conducted special research on music among the South American Indians and submitted a manuscript entitled "Musical Customs of the Southern Hunter Indians of South America" as compiled from the *Handbook of South American Indians*.

INSTITUTE OF SOCIAL ANTHROPOLOGY

The Institute of Social Anthropology was created in 1943 as an autonomous unit of the Bureau of American Ethnology to carry out cooperative training in anthropological teaching and research with the other American republics. During the past year it was financed by transfers from the Department of State, totaling \$94,882, from the appropriation "Cooperation with the American Republics, 1948." The major activities of the Institute of Social Anthropology during the fiscal year 1948 are as follows:

Washington office.—Dr. George M. Foster continued as director of the Institute of Social Anthropology. He traveled to six South American countries during the period February 14 to April 12, 1948, visiting Institute of Social Anthropology field stations in Popayán, Colombia, Lima, Perú, and São Paulo, Brazil. In addition, courtesy calls were made on anthropologists in Barranquilla and Medellín, Colombia, Quito, Ecuador, Cusco, Perú, La Paz, Bolivia, Rio de Janeiro, Brazil, and Caracas, Venezuela. Dr. Foster also spent 3 weeks in México (November 25–December 15, 1947) reading final proof on Publication No. 6 of the Institute of Social Anthropology.

Brazil.—Drs. Donald Pierson and Kalervo Oberg continued their work in São Paulo in cooperation with the *Escola Livre de Sociologia*

e Política. They gave a number of courses in sociology and anthropology, supplementing other courses given by local professors in the general field of the humanities. Dr. Oberg, accompanied by several advanced students, returned to the Mato Grosso for 3 months, July-September 1947, to complete field work initiated the preceding year among the Terena and Caduveo Indians. Dr. Pierson, assisted by advanced students, continued field work at "A Vila," a *caboclo* community near São Paulo. The proximity of "A Vila" to São Paulo made it possible to utilize week ends and short vacations throughout the year, rather than spending a continuous longer period in the field.

Colombia.—Dr. John H. Rowe continued to represent the Institute of Social Anthropology in Popayán, Colombia, cooperating with the Instituto Etnológico of the Universidad del Cauca. Courses in ethnology, linguistics, and archeology were given to the students enrolled in the Instituto and 2 months of field work was carried out among the nearby Guambiano Indians, August-September 1947. Dr. Rowe also twice visited Bogotá to consult with local anthropologists of the National Ethnological Institute concerning anthropological activities in Colombia. Sr. Gabriel Ospina, formerly a student of Institute of Social Anthropology scientists in México, was named director of the newly established Instituto de Antropología Social of the Escuela Normal Superior. Utilizing field techniques learned while working with Dr. Foster in Tzintzuntzan, México, he began a 4-year anthropological study of the pueblo of Vianí, to train local personnel, and to throw light on the functioning of this aspect of Colombian culture.

México.—Dr. Isabel Kelly and Dr. Stanley Newman continued to represent the Institute of Social Anthropology in its cooperative plan with the Escuela Nacional de Antropología. Because of reduced appropriations as compared to the fiscal year of 1947, it was necessary to terminate studies in cultural geography on August 31, 1947, when Robert C. West left this service. Five courses in ethnology and linguistics were given during the academic year. Dr. Kelly, assisted by four students, returned to Tajín, Veracruz, to continue her study of the Totonac Indians. A photographic exhibit in the Benjamin Franklin Library in May 1947, of Totonac Indian scenes, prepared by Dr. Kelly, received favorable comment from many Mexicans, and was thoroughly described in *El Nacional*, the official Mexican Government newspaper. Dr. Newman, working with other faculty members and students, and working with native informants brought from the field, continued research on the Otomí and Nahuatl languages.

Perú.—Dr. Allan Holmberg continued to represent the Institute of Social Anthropology in Perú in its cooperative work with the Instituto de Estudios Etnológicos. As in the case of México, reduced appropriations made it necessary to reduce the Peruvian staff; the services of

Dr. Webster McBryde were terminated on September 30, 1947. Dr. Holmberg gave three courses in ethnology during the year; two, including a seminar on field methods, in the Instituto de Estudios Etnológicos, and one in the University of San Marcos. Three months, February through April, 1948, were again spent in the Virú Valley, bringing to a close the studies initiated the preceding year by Dr. Holmberg, Dr. Jorge Muelle of the Instituto faculty, and selected students.

Dr. Holmberg was one of three official United States delegates to the Hylean Amazon Project of the UNESCO in Iquitos, Perú, in May 1948.

Publications.—Institute of Social Anthropology Publications Nos. 4, 5, 6, and 7, appeared during the fiscal year. These are listed with the publications of the Bureau of American Ethnology.

RIVER BASIN SURVEYS

The River Basin Surveys, a unit of the Bureau of American Ethnology organized to carry into effect a memorandum of understanding between the Smithsonian Institution and the National Park Service providing for the recovery of such archeological and paleontological data and materials as will be lost through the construction of dams and the creation of reservoirs in many of the river valleys of the United States, continued its investigations throughout the year. The work was carried on in cooperation with the National Park Service and the Bureau of Reclamation, Department of the Interior, and the Corps of Engineers, Department of the Army, and was financed by the transfer of \$73,800 from the National Park Service to the Smithsonian Institution. These funds were provided in part by the National Park Service and in part by the Bureau of Reclamation.

Most of the work in the field was of a reconnaissance or survey nature, with only a limited testing of sites where such was necessary to determine their extent and character. In a few cases, however, actual excavations were undertaken. The activities involved 18 States and 38 reservoir areas. By the end of the year the number of reservoir basins surveyed, since the first parties started in July 1946, totaled 85. Their distribution is: Virginia 1, West Virginia 2, Georgia 2, Tennessee 1, Oklahoma 2, Texas 5, Colorado (outside of the Missouri Basin) 4, California 13, the Missouri Basin (7 States) 50, and the Columbia Basin (4 States) 15. Those where surveys were under way but not completed by June 30 are not included in this summary. In the various areas visited 1,576 sites were noted and recorded and of that number 250 have been recommended for extensive excavation. The excavations completed or in progress on June 30 were: New Mexico 1, Wyoming 1, Nebraska 1, South Dakota 1, North Dakota 1,

Texas 1, and Washington 1. Preliminary appraisals with recommendations for further work, supplemented by some technical reports, have been completed for all the areas surveyed. Limited editions of 61 have been mimeographed for distribution to the cooperating agencies. The others were in varying stages of being processed at the end of the year. These mimeographed pamphlets have not been made available to the general public because they are not complete archeological reports and are intended to be used only for reference purposes by the Surveys staff while the program is going forward. Reports for general distribution will be issued after the archeological and paleontological work in each unit has been completed.

General direction and supervision of the work in Georgia, West Virginia, Tennessee, Oklahoma, Texas, New Mexico, Colorado (outside of the Missouri Basin), and some of the California projects were from the main office in Washington. Direction of the program in the Missouri Basin was from a field headquarters and laboratory at Lincoln, Nebr., while the activities in the Columbia-Snake Basin were under the supervision of a field office located at Eugene, Oreg.

The assistance and whole-hearted cooperation given to River Basin Surveys staff men in the field by representatives of the National Park Service, the Bureau of Reclamation, and the Corps of Engineers contributed in no small degree to the success of much of the work. At some of the projects temporary office space and storage facilities were provided, at others transportation was furnished, and in a few cases labor was made available to help in emergency excavations where material had to be recovered immediately. The National Park Service not only obtained the funds necessary for carrying on the program as a whole, but also served as the liaison between the Smithsonian Institution and the other governmental agencies to the benefit of all concerned.

Washington office.—The main office of the River Basin Surveys was under the direction of Dr. Frank H. H. Roberts, Jr., throughout the fiscal year. Carl F. Miller, archeologist, continued to operate from this office, while Joseph R. Caldwell joined the staff as archeologist on December 14, 1947, by transfer from the United States National Museum, and Ralph S. Solecki was appointed in the same capacity on March 2, 1948.

Mr. Miller spent the months from the beginning of the fiscal year until January in completing a "Comprehensive Report on the Archeological Aspects of the Buggs Island Reservoir, Virginia and North Carolina." He left Washington on January 10, 1948, in company with Mr. Caldwell, for Augusta, Ga., where they conferred with the Resident Engineer of the Clark Hill project on the Savannah River. From Augusta they proceeded to Lincolnton, Ga., where they established headquarters, January 13, and proceeded to make a survey of

the archeological remains of the area to be flooded by the Clark Hill Reservoir. During the course of this work they located 128 sites, 70 of which will be covered by water when the dam is completed. These sites included former village areas, camps, and stone-chipping stations, with a few mounds. Materials collected from the surface suggest the former presence of at least six sequent cultural groupings in the area, including a considerable number which possibly antedate the introduction of pottery making. Most of the sites are small and, as a result of long-continued cultivation and erosion, few have any depth. Three of them have been recommended for excavation. Two of the latter are representatives of the type of culture which has been named Stalling's Island, and the third is the Rembert Mound Group described by William Bartram in 1791 and partially excavated by C. C. Jones in 1878 and Cyrus Thomas in 1894 but never thoroughly studied. These mounds belong in the so-called Lamar period in the South-eastern cultural sequence.

Miller and Caldwell completed their work at Clark Hill on May 31 and returned to Washington. They spent the remainder of the fiscal year writing a preliminary report on the results of the survey and preparing recommendations and estimates for an excavation program in the basin.

Mr. Solecki left Washington on March 8, 1948, for Hinton, W. Va., where he established headquarters and began a survey of the Bluestone Reservoir basin on New River. He completed the preliminary reconnaissance on April 19 and left for Huntington, W. Va., to confer with the District Engineer, Corps of Engineers. En route he stopped at Charleston where, with the aid of Mrs. Roy Bird Cook, State Historian and Archivist, he checked the records and manuscripts in the History and Archives Department of West Virginia for possible information on the Indians and early Colonial settlers in the New River valley. He left Huntington on April 21, for Pittsburgh, Pa., stopping to examine some archeological sites at Moundsville, W. Va. At Pittsburgh he obtained information from the District Engineer, Corps of Engineers, about the proposed West Fork Reservoir in the Monongahela Basin in north-central West Virginia. From Pittsburgh he proceeded to the West Fork Reservoir area and made a preliminary reconnaissance of the area that ultimately will be flooded. This work was completed on May 6, and he returned to the Bluestone area for more intensive investigation of the remains occurring there.

Inasmuch as both of the reservoir projects surveyed by Mr. Solecki are in mountainous regions, most of the traces of Indian and Colonial occupation occur along the river bottoms. A total of 42 archeological sites were found in the Bluestone area. These include mound groups, village remains, rock shelters, one location where there are pictographs, and four Colonial forts. At two of the sites, where potsherds were

found on the surface, Solecki did some test digging. The material thus obtained places the cultural horizon in late pre-Columbian times and indicates certain links between the Ohio Valley and the Great Valley of the Shenandoah. Test excavations were also made in the largest of the rock shelters where both historic and prehistoric objects were found, the latter occurring in the deposits to a depth of 5 feet. Because no previous archeological work has been done in this district the excavation of three of the village sites and the large rock shelter has been recommended. Solecki found 14 small sites, presumably places where transient hunting parties had camped, in the West Fork Basin. None of these are of sufficient size or depth to warrant further study and no additional work was recommended. The West Virginia surveys were completed on May 28 and Solecki returned to Washington where he spent the remainder of the fiscal year preparing reports on the results of his investigations.

Dr. Gordon R. Willey, archeologist on the regular staff of the Bureau of American Ethnology, was detailed to the River Basin Surveys during August and September. On August 14 he went to Nashville, Tenn., where he visited the office of the District Engineer for the purpose of obtaining information about the Center Hill project on the Caney Fork River near Baxter, Tenn. From there he proceeded to Baxter and from August 20 to September 12 carried on a survey of the area to be flooded. He found 39 sites consisting of temple mounds, small earth-rock mounds, villages, and caves showing some signs of occupation. Many of the sites proved to be Middle Mississippian in culture and period; some suggested that they belonged in the pre-Mississippian category, and others may even represent the Archaic. The Middle Mississippian designates the period when the people lived in large sedentary communities, depended primarily on intensive agriculture for their subsistence, built temple or substructure mounds, and made characteristic types of pottery and other artifacts. This generally is believed to have been about A. D. 1300 to 1700. Pre-Mississippian also has been called the Burial Mound period, or Southeastern Woodland culture. At that stage the people lived in smaller communities or scattered households, lived primarily by hunting, fishing, food gathering supplemented by a little agriculture. This was during the centuries from approximately A. D. 800 to 1300. The Archaic refers to small, scattered groups of primitive hunters and food gatherers who are believed to have occupied the area prior to A. D. 700. Excavations were recommended for one of the temple-mound sites and one of the earth-rock burial mounds, with testing in some of the village remains. Unfortunately flooding started before this could be accomplished, and the material obtained from the survey constitutes most of our knowledge of that portion of the Cumberland Basin.

After completing the survey at Center Hill, Dr. Willey proceeded to Knoxville, Tenn., where he discussed archeological problems with members of the Department of Anthropology at the University of Tennessee. From there he returned to Washington and prepared his report. He returned to his regular duties as a member of the Bureau staff on October 1.

Oklahoma.—David J. Wenner, Jr., was appointed field assistant on July 29, 1947, and proceeded to make a survey of the Hulah Reservoir basin on the Caney River in Oklahoma. The area to be inundated by this project is not large and he was able to cover it in a few days' time. He found four sites, all apparently camping places, and because of their meager nature, did not believe them worthy of further investigation. From the Hulah region he proceeded to the Fort Gibson Reservoir project on the Grand (Neosho) River. A rapid survey of that basin located 24 sites consisting of 1 mound group, 1 bluff shelter, and the remains of 22 villages or camps. All but three of the sites will be covered by water. The most important is the mound group known as the Norman site. It originally consisted of six earth mounds and a large surrounding village area. Some work was done in four of the lesser mounds a number of years ago by the University of Oklahoma. One of the two remaining mounds is the largest at the site and is connected to an adjacent low mound by a ramp. Small test excavations have been made in the low mound but the large one is virtually intact. It represents a stage of cultural florescence in the southern United States about which very little is known and may be comparable in scientific wealth to the famous Spiro mounds, located in an adjacent county, destroyed by treasure hunters some 15 years ago. Excavation of the Norman mound probably would provide information essential to dating the Spiro-type culture which presumably was the forerunner of the native Caddo culture of the southern Plains at the beginning of historic times. For this reason thorough investigation of the remaining manifestations at the Norman site was recommended.

Mr. Wenner completed his field investigations on August 15 and proceeded to Norman, Okla., where the University of Oklahoma provided him with facilities for studying the material collected and writing his reports. During the period of the surveys and the preparation of the reports, Dr. Robert E. Bell, of the Department of Anthropology at the University, assisted Mr. Wenner as an advisor and consultant. After completion of the work Mr. Wenner left the Surveys to return to college. He again joined the staff on June 28, 1948, and at the close of the fiscal year was engaged in making a survey of the Tenkiller Ferry Reservoir on the Illinois River in the eastern part of the State. Robert Shalkop and William Mayer-Oakes, student assistants, were aiding in this work.

Texas.—The River Basin Surveys in Texas continued to operate throughout the year from the base and headquarters supplied by the Department of Anthropology at the University of Texas, Austin. Excavations were completed at one project, the survey of another reservoir basin was brought to conclusion, and two others were started and finished.

At the beginning of the year Joe Ben Wheat, archeologist, was engaged in excavations at the Addicks Reservoir. This work was terminated on July 15. Mr. Wheat then proceeded to Austin where he studied the material he had collected and prepared a preliminary report covering both the results of his survey of the Addicks Basin and his excavations in two of the sites located there. He also wrote a paper "Archeological Survey of the Addicks Basin: A Preliminary Report" which was published in volume 18 of the Bulletin of the Texas Archeological and Paleontological Society. He resigned from the Surveys on August 15 in order to return to the university and complete his graduate work.

The excavations at the Addicks Reservoir proved interesting because they revealed a sequence of cultural stages extending from the era before pottery making and agriculture were introduced through succeeding centuries until the beginning of contact with European culture. The period covered is from about A. D. 900 to 1700. Who the people were is not known, but certain postulations may be made. At the time of the first French and Spanish explorations of the region the Akokisa band of the Atakapan occupied the area. Although little is known of the specific culture of this group, it is generally considered to have shared the general Atakapan culture extending into the lower Mississippi Valley. The archeological culture is of the same southeastern pattern, which may point to the Akokisa as being the pre-Columbian inhabitants of the Addicks district.

At the beginning of the fiscal year Robert L. Stephenson, archeologist, was making a reconnaissance of the Whitney Reservoir basin on the Brazos River north of Waco. This work continued until October 1, although August 2-4 he returned to Austin for the purpose of depositing material collected and of conferring with members of the Department of Anthropology at the University of Texas; August 30 to September 1 he visited the Spanish Fort and other sites in the central Red River area; and September 13-14 he went to a number of archeological locations near Waco, but outside the reservoir basin, for the purpose of gathering comparative data. On August 23 he made a 1½-hour flight over the entire Whitney area, successfully locating archeological sites from the air and obtaining a comprehensive understanding of the district as a whole. He returned to Austin on October 1 and spent most of the following 2 months studying the material collected and writing the preliminary report. He also prepared an ar-

ticle, "Archeological Survey of Whitney Basin," which was published in volume 18 of the Bulletin of the Texas Archeological and Paleontological Society.

During the course of his investigations Mr. Stephenson located and recorded 61 sites in the Whitney Basin. These consist of 14 rock shelters and 47 occupational areas in the open. Two fossil localities were also located. He recommended 32 sites for further testing and excavation. Such work should produce important evidence on the cultural complexes of that portion of Texas.

Mr. Stephenson left Austin on November 26 and went to Lincoln, Nebr., where he studied the field and laboratory methods being used by the Missouri Basin Survey group. While at Lincoln he also attended the Fifth Conference for Plains Archeology and presented a paper on the work which he had been doing in Texas. He returned to Austin on December 5 and on the 9th left to begin a survey of the Dam "B" Reservoir basin on the middle Neches River in the eastern part of the State. This work was completed on January 18, 1948, having been interrupted by a trip to the Whitney Reservoir where 3 days were spent in showing Dr. Theodore E. White, paleontologist, the bone deposits located earlier. While on this trip Mr. Stephenson located a large mound and accompanying village remains on the upper Neches River near Palestine, Tex. From Dam "B" he proceeded to the McGee Bend Reservoir on the lower Angelina River. Inclement weather, however, interfered with active work in the field, and most of the time until February 16 was devoted to studying local collections of artifacts, working on field notes, and on the report on the results of the Dam "B" investigations. During this interval he also went to Galveston, Tex., for a 3-day conference at the office of the District Engineer, Corps of Engineers, regarding the dates of beginning and completion of reservoir projects in all parts of Texas. The period from February 16 to April 15, except for 3 days (March 5-7) spent at Nacogdoches studying old records to obtain data on the early history of the area, was devoted to reconnaissance of the McGee Bend basin. When the survey was finished Mr. Stephenson returned to Austin and was occupied until the end of the year in preparing his reports on the Dam "B" and McGee Bend investigations.

In the survey of the Dam "B" area 12 sites were located, but none gave indication of being of sufficient importance to warrant further examination. Comparable material occurs both in the McGee Bend Basin and elsewhere in the region. Unless construction work should reveal subsurface deposits of archeological significance no additional work will be required at this reservoir and none was recommended. At McGee Bend 80 sites were located and recorded. Of this number, 8 are early and contain no pottery, 34 are early pottery sites of the Alto Focus (ca. A. D. 1000 to 1300), 22 are late pottery sites of Bossier,

Belcher, and Frankston Foci (ca. A. D. 1450 to 1600), and 1 is a historic site. At many of these locations there are evidences of occupation through two or more cultural periods and they are important for that reason. Out of the group 31 sites have been recommended for further testing or more extended excavation.

New Mexico.—The only work done thus far in New Mexico consisted of the excavation of portions of two shallow rock-shelters 8 miles southeast of Tucumcari. The manifestations at that location, the Hodges site, were outside of the area directly involved by the Tucumcari project and were in no danger of destruction either by construction work or flooding. They were being dug, however, on week ends and holidays by workmen from the project and by settlers attracted to the district by the development of the irrigation program. In order to salvage as much as possible of what still remained, the excavations were initiated by Herbert W. Dick, temporary field assistant, who was employed by the Surveys for that purpose. Mr. Dick worked at the Hodges site from August 18 to 26. He found that both shelters contained a homogeneous lot of archeological material representing a late pre-Columbian cultural period in that part of the Southwest. On the basis of potsherds, found in association with the stone and bone artifacts, a late fourteenth or early fifteenth century dating is given to the archeological manifestations. After completing the digging Mr. Dick went to Albuquerque, N. Mex., where he processed the specimens and prepared a preliminary report on his findings.

While Mr. Dick was engaged at the Hodges site it was visited by Dr. Sheldon Judson who was completing a geological study of the San Jon, N. Mex., region for the Smithsonian Institution. Dr. Judson found that the lower deposits in the shelters contained interesting and helpful stratigraphy and from the evidence he obtained there was able to add another link in the "alluvial chronology" which he has established for that district, the chronology which promises to contribute much to the understanding of the complex history of the Late Pleistocene and subsequent periods in the Southwest. Because of this the Hodges site enjoys an importance out of all proportion to its antiquity and the archeological information which it produced.

Colorado.—Investigations in certain portions of Colorado are a part of the major program for the Missouri Basin, but there are a number of others which fall outside that drainage area and which are being conducted as separate units of the Surveys as a whole. These are in the Arkansas and Gunnison Basins. Later they will be expanded to the Colorado-Big Thompson projects and other tributaries of the Colorado.

Donald Eastman and Gary L. Yundt were appointed field assistants on June 7 and immediately began surveys at a number of reservoir basins in the Gunnison drainage. Brief preliminary investiga-

tions had been made at a number of these projects by Western State College, Gunnison, students under the direction of Dr. C. T. Hurst of that institution. Working in conjunction with Dr. Hurst and under his general direction, Eastman and Yundt completed the surveys of the Cottonwood, Cebolla, Gateview, and Almont reservoir areas and at the close of the year were engaged in a reconnaissance of the Taylor Lake project. The four basins where investigations were completed contained 16 sites consisting of both rock shelters and open camps. None appeared to be of sufficient importance to warrant recommendation for further study by the River Basin Surveys. However, Dr. Hurst and Western State College volunteered to take over such of the units as indicated the possibility of contributing some knowledge and assume responsibility for the additional work needed to obtain it.

Arnold M. Withers was appointed to the Surveys staff on June 13 as archeologist and on June 21 left Denver accompanied by W. W. Thompson and M. F. Sullivan, student assistants, to begin the reconnaissance of a number of reservoir projects in the mountains west of Pueblo. This work was going ahead at the close of the fiscal year. Mr. Withers and his associates used space made available by the Department of Anthropology of the University of Denver as their base of operations.

Missouri Basin.—The Missouri Basin project continued in full operation throughout the year. On July 1, three archeological surveys and one paleontological reconnaissance were under way and the headquarters and laboratory at Lincoln, Nebr., were actively engaged in processing data and specimens received from the field parties. Most of the activities were of a survey nature, but some digging was done at Birdshad Cave in the Boysen Reservoir, Wyo., at Medicine Creek Reservoir, Nebr., and at several paleontological sites in Wyoming. By the end of the first week in November weather conditions were such that it was necessary to stop explorations for the season and all regular personnel returned to Lincoln. From then until conditions again became favorable in the spring, the time was devoted to the study of materials and data collected and the preparation of reports. Field work was initiated March 29, 1948, when an extensive series of excavations was started at sites soon to be destroyed by construction operations at the Medicine Creek Dam in western Nebraska. This work was in accordance with an agreement with the Bureau of Reclamation whereby the River Basin Surveys provided the technical supervision and the Bureau of Reclamation furnished the necessary labor and equipment. This undertaking was still in progress at the end of the fiscal year. On June 1 one archeological party left Lincoln for the Angostura Reservoir, S. Dak., for further survey and excavation, and on June 3 another left for Heart Butte Reservoir, N. Dak., to begin similar activities. A paleontological party departed on June 1 for the

Boysen Reservoir area, Wyoming, to resume the collecting of fossil material. All three parties were at those respective locations at the end of the year.

The general results of the Surveys' findings in the Plains were outlined in the 64th Annual Report of the Bureau of American Ethnology and, although subsequent work added important details, need not be repeated. Some mention, however, should be made of the excavations carried on in the present year. Birdshand Cave, located near the base of the Owl Creek Mountains, in the Boysen Reservoir basin, Wyoming, contained several levels of aboriginal debris of occupation separated by layers of decomposed rock and dust. The artifacts recovered, although small in number, show significant differences from level to level. If these specimens can be correlated with those from some of the single-occupation sites in the basin, a task which was being attempted at the close of the year, it may be possible to arrange the latter in a sequential order and thus establish a relative chronology for the area. As a whole the material from upper levels of the cave suggests a late pre-Columbian occupancy by Indians from the Great Basin farther west rather than by people from the Plains. This introduces another set of problems pertaining to the interrelationships between two rather distinct groups over a long period of time. Further work in the area should throw light on the subject.

Excavations at the Medicine Creek Reservoir were carried on from September 5 to November 9, but little more than sampling was undertaken at that time. When the work was resumed in March, large-scale operations became possible through the labor and power machinery contributed by the Bureau of Reclamation. The use of heavy equipment ordinarily is frowned upon by archeologists. Because of the short time available for excavation before the sites were destroyed by construction activities and the lack of funds needed to hire large labor crews, however, it was deemed advisable to use bulldozers and highway-grading machinery to remove the overburden from buried village remains. The results obtained amply demonstrated the practicability and effectiveness of such equipment in uncovering archeological materials with a minimum of breakage, and wherever possible its use probably will be extended to other projects. At Medicine Creek entire sites were stripped of their sod or other cover, making it possible to observe the complete village plan, to study village patterns, and to discover small features not readily determinable by the usual hand-labor methods. From March 29 to June 30 the remains of 25 houses were uncovered, 37 cache pits located beneath their floors were investigated, 13 similar pits outside the houses were examined, and 13 middens were dug. Some 28,000 specimens including utensils made of pottery, tools of bone, stone, and shell, and the remains of various food stuffs such as animal bones, mussel shells and charred

vegetal materials (corn, beans, seeds of sunflower, squash, and wild plum) were found. In a number of cases sections of wood in an excellent state of preservation were obtained from post holes in the house floors. These specimens are of value for determining the type of vegetation in the area hundred of years ago and possibly may furnish information for dating purposes.

Most of the remains in this district belong to the Upper Republican culture, so named because the first of the type studied and defined were located in the Republican River drainage of southern Nebraska. It is not possible at this time to correlate them with any of the known tribes, such as the Dakota, Pawnee, or Comanche, but this may be done later. Remains of this culture are believed to date from ca. A. D. 1200 to 1500. A few of the sites appear to belong to what has been called "Woodland" because of their close relationship to others east of the Missouri. Tentative dating places it in the centuries A. D. 500 to 1200. In addition there are traces of a primitive hunting people who inhabited the area several millennia earlier. There is no doubt that the work at Medicine Creek has added a large and important body of new data on the pre-Columbian inhabitants of western Nebraska and from it an unusually complete picture of life in the area should emerge. It seems evident that several long-held scientific theories regarding those people and their relationship to their environment will need to be revised. The information from Medicine Creek certainly will be one of the most significant contributions yet made to the study of Plains prehistory.

The paleontological work, under T. E. White, while not as important in some ways as the archeological investigations, is making a definite contribution to geology. This is particularly true in the Wind River Basin in Wyoming where data collected by the River Basin Surveys field party has aided in the identification of younger beds than previously had been supposed to be present in the area. Furthermore, no historical summary of paleontology in any of the river basins would be complete without consideration of the fragments of fossil bones and leaves frequently found by archeologists in Indian sites. These objects probably were collected as curiosities, although they occasionally were used as ornaments and sometimes attempts were made to work silicified bones into implements. While not of great significance to paleontology, they are a part of the story, and study of the material is helpful. Thus far 94 reservoir areas in the Missouri Basin have been examined either briefly or in some detail, and specimens have been collected from some 68. In a number of cases this material has helped to clarify understanding of the area and will provide useful data for future reference.

As during the previous year, Dr. Waldo R. Wedel, on detail to the River Basin Surveys from the Division of Archeology, United States

National Museum, was in charge of the program. He prepared general plans and coordinated all phases of the work, making numerous trips of inspection to the areas where surveys and excavations were in progress and supervising the work at Lincoln. He returned to his official station at Washington on October 31, but during the fall and winter months made regular monthly trips to Lincoln to check on the work being done at the field headquarters and laboratory and to assist, through advice and discussion, in the preparation of the reports on the summer's activities. He left Washington on May 26 for Lincoln and on his arrival there resumed active direction of the program for the field season.

J. Joseph Bauxar, archeologist, was at Chamberlain, S. Dak., at the beginning of the fiscal year with the party, under the direction of Paul L. Cooper, which was engaged in making a preliminary reconnaissance of the west side of the Missouri River in the Fort Randall Reservoir area. During the continuance of this work 82 sites were visited, and data on about 20 others were obtained from local people. On July 19 test digging was initiated in some of the more promising sites. The period from July 19 to August 20 was devoted to the examination of burials at the Wheeler Bridge mound site. These occurred in 2 low mounds. At one of these there were 12 bundle burials, and at the other 2, or possibly 3, of the same type. Inasmuch as there were no funerary offerings accompanying any of the burials and the material in the mounds was scarce, there was nothing to indicate possible cultural relationship for these remains. On August 20 Mr. Bauxar shifted his operations to the Pease Creek site where he opened an exploratory trench through a large refuse mound. Two definite occupation levels were noted there, and a large quantity of cultural material was recovered. The specimens suggest affiliation with either Upper Republican or prehistoric Arikara peoples. On September 17 investigations were started at another site which gave indications of a well-defined occupation level. Two trenches were dug at that location. They revealed a well-defined occupation level which extended below the plow zone. This work was completed on October 6, and attention was then turned to the Oldham site where two subsurface circular house floors were uncovered. These presumably belong to a late occupation which apparently was Arikara. Some slight evidence of an earlier Woodland occupation was also noted. A preliminary examination of all the data collected from the various sites investigated indicates a range of cultural types extending back from late historic Yankton through what possibly was early Arikara and even earlier Woodland.

Mr. Bauxar returned to Lincoln on November 6 and from then until April 4 was engaged in working up his material and in establishing an ethnohistory file for the Missouri Basin to be used as a ready

reference by the staff in correlating archeological materials with those of known tribes. The Thwaites and Biddle editions of the Lewis and Clark journals and the Ordway journal were the sources examined for the desired information. A total of approximately 1,500 items pertaining to tribal locations, contacts, material culture, and other features were extracted from these journals. When this material has been prepared for filing under tribal and subject-matter headings, it probably will fill some 15,000 index cards.

From April 4 to June 26 Mr. Bauxar was on special assignment to the National Park Service for the purpose of conducting historical investigations at the Homestead National Monument in Gage County, Nebr. Five limited areas were examined, and a report on the excavations was prepared and submitted to the National Park Service, Region Two Office, at Omaha. Upon the completion of this detail Mr. Bauxar returned to the Lincoln headquarters and resumed his work on the ethnohistory project.

On July 1 Wesley L. Bliss, archeologist, was working with the field party under his direction at the Glendo Reservoir project in Platte County, Wyo. The survey of this area, started in the month of June, was completed on July 2, and having located a total of 43 sites the party moved the following day to Boysen Reservoir, in Fremont County, where further investigations were carried on until July 26. During this period tests were made in Birdshhead Cave in the Owl Creek Mountains about 5 miles west of the dam site. This cave showed six levels of occupation, and prospects for obtaining interesting information about the aboriginal inhabitants of the area were so promising that plans were made to return to it later in the season. On July 27 the party moved to the Oregon Basin project in Park County where it continued reconnaissance work, locating additional sites which increased the total for the basin to 28, and did some test digging in two rock shelters. August 11 it moved to the Canyon Ferry Reservoir near Helena, Mont. Investigations there added to the number of sites located during the preliminary examination of the area in 1946, making a total of 31. The work there was completed on August 26, and attention was turned to the proposed Tiber Reservoir near Shelby, Mont., where work continued until September 9. During this period Mr. Bliss and his party spent 4 days traveling by boat in order to locate and examine sites exposed along the river-cut terraces. These sites could not be reached by land and were not visited during the preliminary reconnaissance made the previous year. Additional sites located bring the total for Tiber to 53. Leaving this area, Mr. Bliss returned to the Boysen Reservoir and from September 11 to November 6 completed excavation of the Birdshhead Cave and did some test digging in other sites. He returned to Lincoln on November 8 and from then until the end of the fiscal year was engaged

in laboratory work and the preparation of supplementary reports on the Glendo, Boysen, and Canyon Ferry projects. He also wrote a "Summary Report on the Archeology of the Wyoming-Montana River Basin Surveys of 1947—with Comments on Smokey Hill and Republican River Sub-basins in Kansas and Nebraska." Mr. Bliss presented two papers at the Fifth Conference for Plains Archeology in November. One of these summarized the results of the archeological surveys in Wyoming and Montana and the other discussed the subject of Early Man in the northwest Plains. Mr. Bliss also attended the joint meeting of the American Anthropological Association and the Society for American Archeology at Albuquerque, N. Mex., in December, and presented a paper dealing with archeological problems in the western Plains.

As previously stated, Paul L. Cooper was in charge of a survey party which at the beginning of the fiscal year was operating in the Fort Randall Reservoir area in South Dakota. On July 12 and 13 Mr. Cooper attended a field conference of workers in upper Missouri River archeology at Bismarck, N. Dak., and from there he accompanied Dr. Waldo R. Wedel, field director of the River Basin Surveys, and Dr. Jesse D. Jennings, National Park Service archeologist, on an inspection trip to a site which was being excavated by the University of North Dakota near Fort Yates, N. Dak. From there he returned to Lincoln and until August 4 worked on a preliminary report on the archeological resources of the Fort Randall Reservoir. On August 6, after conferring for 2 days with personnel of the Corps of Engineers in Omaha and with the Director of the University of South Dakota Museum at Vermillion, Mr. Cooper returned to the Fort Randall field unit which had been under the direction of Mr. Bauxar during his absence. From then until October 28 he remained with the field party and participated in the investigations already discussed in connection with Mr. Bauxar's activities. He then returned to Lincoln to take charge of the field headquarters upon the departure of Dr. Wedel for Washington.

Mr. Cooper continued this supervision, which was both technical and administrative, throughout the fall and winter months during the periods when Dr. Wedel was in Washington. He made several trips to Omaha and Denver for the purpose of consulting with officials of the National Park Service, the Corps of Engineers, and the Bureau of Reclamation. As time permitted, the data collected during the field season were summarized preparatory to the writing of technical reports, and preliminary reports were prepared on certain phases of the field work. He also participated in the Fifth Conference for Plains Archeology, presenting a paper summarizing the field work and discussing pottery types found in certain districts in the Plains area. In May Mr. Cooper represented the Missouri Basin project of the River

Basin Surveys at the annual session of the Nebraska Academy of Sciences and read a paper explaining and summarizing the activities of the Surveys. On June 3 Mr. Cooper left Lincoln for North Dakota. Two days were spent en route in conferring with personnel at the University of South Dakota Museum. Arriving at the Heart Butte Reservoir project on the Park River in North Dakota, Mr. Cooper initiated reconnaissance work and started some test excavations in a site not far above the location for the dam. These investigations were in progress at the close of the fiscal year.

Robert B. Cumming, Jr., archeologist, continued to serve as the laboratory supervisor at the Lincoln headquarters. He planned and directed the procedures for processing specimens, photographic negatives and prints, the preparation of maps and diagrams for the reports, the typing of manuscripts and cutting of stencils, and the general maintenance of equipment. During the course of the year 37,406 specimens were cleaned, repaired if necessary, numbered, cataloged, and stored. Since the beginning of the project 59,306 specimens have been processed. Over 830 photographic negatives and their prints were added to the files, bringing the total to 1,256. Approximately 100 kodachrome positives were cataloged, making 179 now available for use in illustrating talks about the program. During the year Mr. Cumming established a file for photographic enlargements suitable for publicity purposes and one for lantern slides. Reference maps and aerial photographs were indexed and filed, 835 of the former and 277 of the latter now being available for use by the staff. In addition Mr. Cumming assisted in and supervised the mimeographing and assembling of reports issued during the year. These consisted of 10 preliminary archeological reports, 5 supplementary archeological reports, and 2 paleontological reports. He also carried on the project inventory and requisitioning of supplies throughout the year. During such times as the field director and acting director were away from Lincoln he was in charge of the field office.

From July 1 to November 7, Jack T. Hughes, archeologist, assisted Wesley L. Bliss in Wyoming and Montana, where he participated in reconnaissance and survey of several reservoir basins. From November 8 to May 30 he worked in the office at Lincoln where he aided in the preparation of various reports on the field work of the 1947 season. He wrote two reports entitled "Supplementary Appraisal of the Archeological Resources of Oregon Basin Reservoir, Park County, Wyoming" and "Supplementary Appraisal of the Archeological Resources of Tiber Reservoir, Toole and Liberty Counties, Montana." He also prepared the following section of a report entitled "Archeology of Birdshhead Cave, Fremont County, Wyoming": Introduction, site, locale, occupation, and complexes, as well as parts of those on remains

and conclusions. During this period Mr. Hughes also devoted some of his time to an analysis of the archeological materials in the collection of the Nebraska State Historical Society from the Barn Butte site on the North Platte River in Garden County, Nebr., in the preparation of a report on this site; the preparation of a table showing proposed correlations of geological, climatological, and archeological events at several selected sites in the western United States; and in the preparation of a report on stonework terminology for the Nomenclature Committee of the Conference for Plains Archeology.

Mr. Hughes left Lincoln on June 1 for the Angostura Reservoir in South Dakota where, with J. M. Shippee, field assistant, he began a reconnaissance and intensive survey of the area to be flooded. This work was in progress at the close of the year.

At the start of the fiscal year, Marvin F. Kivett, archeologist, was in charge of a party engaged in an archeological reconnaissance of the proposed Garrison Reservoir in northwest North Dakota. This reconnaissance included surface survey and limited test excavations in a number of the more important of the 70-odd known sites located in and adjacent to the reservoir. These sites include permanent earth-lodge villages, buried occupational zones, burial locations, and numerous tipi-ring groups. The reconnaissance was terminated at Garrison on August 20, and the party transferred its attention to the Baldhill Reservoir on the Sheyenne River, where a brief reconnaissance was carried on from August 22 to August 28. This resulted in the location of 10 archeological sites, 7 of which were occupational areas and 3 were mound groups. All the occupational sites yielded some pottery, while one mound tested yielded four disarticulated burials. The party returned to the River Basin Surveys Laboratory in Lincoln on August 29.

On September 5 Mr. Kivett went to the Medicine Creek Reservoir, Frontier County, Nebr., to do some test digging at several previously located sites. Four pit-house floors, located in two village sites attributable to a variant of the Upper Republican complex, were excavated, and an occupational area located on a low terrace near the mouth of Lime Creek was tested by means of trenches. The latter site presumably is a variant of the Woodland pattern. This work was terminated on November 9 because of inclement weather, and Mr. Kivett returned to Lincoln.

During the period November 10 to March 27 Mr. Kivett prepared preliminary archeological reports for the Baldhill and Garrison Reservoirs in North Dakota, and the proposed Davis Creek Reservoir in Nebraska. He also worked on a technical paper dealing with a shell-bead ossuary excavated during the fall of 1946 on Prairie Dog Creek, Phillips County, Kans., near the upper limits of the Harlan County Reservoir.

On March 28 Mr. Kivett returned to the Medicine Creek Reservoir to begin an extensive excavation program. During the period March 29 to June 30, three village sites on or near the dam axis were excavated, and digging was started at the remains of a fourth village a short distance above the dam in the reservoir basin. This work included the uncovering of 25 house floors, the recovery of 2 burials, and extensive excavations in midden areas associated with the house floors. Power machinery, furnished by the Bureau of Reclamation, was used primarily for removing the sterile overburden covering most of the area, for the removal of refuse dirt, and for digging exploratory test trenches. The bulk of the materials recovered appear to be attributable to the Upper Republican aspect. At the close of the fiscal year the work was continuing, with attention being directed toward a series of small sites on the right bank of the reservoir basin approximately 1 mile above the dam axis.

George Metcalf was appointed field assistant on September 25 and proceeded immediately to the Medicine Creek Reservoir where he joined Marvin F. Kivett in the excavation being conducted there. He returned to Lincoln on November 9 and from then until March 28, when he again went to Medicine Creek, he devoted his time to classifying, studying, and writing a technical paper on the specimens collected during the field work. This report included not only the material obtained by the River Basin Surveys party, but also that secured by a group from the Nebraska State Historical Society which had excavated several house sites in the area during the summer. Mr. Metcalf's manuscript will be incorporated into the major report on the Medicine Creek investigations. On June 30 he was in charge of a portion of the work at Medicine Creek.

J. M. Shippee, field assistant, was with the Bliss party from July 1 to November 8. After his return to Lincoln he devoted the time in the laboratory to work on the specimens from Birdshad Cave, the sorting and classifying of artifacts from other localities, and the preparation of maps. He left Lincoln on June 1 with the Hughes party and was participating in the surveys at Angostura Reservoir at the end of the year.

Dr. Theodore E. White, paleontologist, was occupied in paleontological reconnaissance from July 1 to September 19. In the course of this work he visited 7 reservoir areas in Nebraska, 23 in Wyoming, and 25 in Montana. This phase of his investigations was interrupted from August 21 to September 11 while he dug the skull and several vertebrae of a dinosaur from the Jurassic Morrison beds in the Middle Fork Reservoir area in northeastern Wyoming. Dr. White returned to the Lincoln office on September 20 and spent the time until October 8 preparing preliminary reports on the reservoir projects examined during the summer. He then left for the Rocky Ford and Philip

Reservoir areas in South Dakota and from there proceeded to the Boysen Reservoir in Wyoming where he initiated a survey of the area to be inundated by that project. While in the Boysen Basin he collected a number of specimens of fossil mammals and a large soft-shelled turtle. He returned to Lincoln November 7 and from then until January 6 devoted his time to writing reports and consulting geological literature for information bearing on the reservoir areas.

Leaving Lincoln, Dr. White went to Texas where, from January 9 to 29, he made a paleontological reconnaissance of the Whitney Reservoir basin on the upper Brazos River. From there he returned to Washington, D. C., and from February 2 to May 15 worked in the United States National Museum identifying osteological material obtained from archeological sites, examining specimens, consulting geological literature relative to the reservoir areas in the Missouri Basin and Texas, and preparing reports. He then went to the Lincoln office and devoted the period from May 18 to June 1 making preparations for the summer's field activities. He left Lincoln on June 1 for the Boysen Reservoir where he resumed the investigations interrupted by the onset of bad weather the previous autumn. From June 4 to June 30 he collected a number of specimens of fossil mammals and reptiles and made extensive notes on the structure and stratigraphy of the area.

A number of student assistants were employed during the year as members of the various field parties. Robert L. Hall and Warren Wittry were with the Cooper party in South Dakota from July 1 to September 10, when they returned to college. Both men again joined Mr. Cooper on June 22 and were working with him at the Heart Butte Reservoir at the end of the fiscal year. Gordon F. McKenzie, John L. Essex, and Leo L. Stewart were with Marvin F. Kivett at the Garrison and Baldhill Reservoir projects in North Dakota at the beginning of the fiscal year. Mr. Stewart left the party on August 20, and Mr. Essex and Mr. McKenzie terminated their employment on August 30 following the return to the Lincoln headquarters. H. G. Pierce was with the Bliss party in Wyoming and Montana from July 1 to September 10. John C. Donohoe assisted Dr. Theodore E. White from July 1 to September and again joined him on June 14 for work in the Boysen Reservoir. Ernest Lundelius joined the staff on June 1 and left Lincoln with Dr. White when he started for Wyoming. Both he and Mr. Donohoe were with the White party at the close of the year.

Pacific Coast area.—During the fiscal year the River Basin Surveys project in the Pacific Coast region carried out investigations of the archeological and paleontological resources in 14 reservoir areas in the Columbia Basin, and in 7 reservoir areas in central California. The results of this work were described in reports prepared for mimeographing and limited distribution. A total of 180 sites were found

in the Columbia Basin reservoirs, including sites of major and minor importance, and a total of 80 in those in California.

Dr. Philip Drucker, detailed from the regular staff of the Bureau to serve as field director, was in charge of activities in this area. During the period from July 1 to September 30 he made field headquarters at Eugene, Oreg., utilizing office space made available to the Surveys by the Department of Anthropology of the University of Oregon. He divided his time about equally between the Eugene office, where he planned the survey work and carried out the routine necessary for its operation, and the field, where he at times accompanied the survey parties, and checked on the results of their investigations. At the end of September he departed for Washington, D. C., having closed the field headquarters for the winter. In Washington he prepared the reports previously mentioned on the basis of the data collected by the field parties, in addition to his activities as a member of the staff of the Bureau of American Ethnology.

On May 13 he left Washington for the Pacific Coast, stopping en route at Milwaukee, Wis., for the purpose of conferring with the Committee for the Recovery of Archeological Remains which met in that city on the 14th and of participating in a symposium on the River Basin Surveys program. He arrived at Portland, Oreg., where he conferred with the officials of the Columbia Basin Recreational Survey Office concerning the status of various reservation projects of the Bureau of Reclamation and the Corps of Engineers in the Columbia Basin. On May 18 he arrived in Eugene, Oreg., where he completed arrangements for office and laboratory space at the Department of Anthropology of the University of Oregon. From May 20 to 28 he conferred with officials of the Region Four Office of the National Park Service at San Francisco on plans for the field season, and also with representatives of the departments of anthropology at the University of California, Berkeley, University of California at Los Angeles, and the University of Washington. As the result of these conferences, arrangements were made for two cooperative programs of research. The Department of Anthropology of the University of Washington arranged to put a party in the field under the direction of a member of the River Basin Surveys staff, to make an intensive survey and preliminary testing of the Potholes (O'Sullivan) Reservoir area in eastern Washington. The corresponding department at the University of California arranged to undertake investigations during the latter part of the summer in reservoirs in the upper San Joaquin drainage that had previously been examined by the survey.

During the month of June Dr. Drucker was occupied with planning the itineraries of survey field parties and obtaining the necessary personnel and equipment for them. On June 28 the parties were assembled, given the necessary instructions, and sent into the field. At

the close of the fiscal year Dr. Drucker was at the field headquarters in Eugene.

Franklin Fenega and Clarence E. Smith, archeologists, had just commenced their field work at the beginning of the fiscal year. During the month of July they investigated three reservoir areas in the Willamette River drainage, the Detroit, Dorena, and Meridian, in Oregon. From there they proceeded to the site of the McNary Reservoir on the Columbia River just upstream from Umatilla, Oreg., and Plymouth, Wash., where they continued investigations for the remainder of the summer. All these reservoirs are Corps of Engineers projects. McNary Reservoir they found to be extremely rich in archeological remains, and after the preliminary reconnaissance survey had been completed on August 20, they carried out an intensive survey to establish which of the many sites found would most fruitfully reward excavation. On the basis of their intensive survey it was possible to make recommendations for the excavation of five groups of sites. On completion of the field work they summarized their field data, and submitted a preliminary report. Mr. Fenega resigned from the River Basin Surveys on September 22 in order to return to his academic work at the University of California. Mr. Smith was transferred to temporary headquarters at Berkeley, Calif., on the 22d, and carried out surveys at the following reservoirs in California: Dry Creek, Monticello, Kelsey Creek, Indian Valley, Sly Park, and Wilson Valley. On December 17 he resigned from the Surveys to resume academic work at the University of California.

Richard D. Daugherty, archeologist, and Francis A. Riddell, field assistant, were also just starting field work at the beginning of the fiscal year. During the remainder of the field season they examined the following reservoir areas: Cascade, Smith's Ferry, Scrivers Creek, Garden Valley in Idaho; Equalizing, Long Lake, and Potholes (O'Sullivan) in Washington; Anderson Ranch and Palisades in Idaho; and Hungry Horse in Montana; all projects of the Bureau of Reclamation. The greatest wealth of archeological remains they found to occur in the Bureau of Reclamation's Columbia Basin project, comprising Equalizing, Long Lake, and Potholes (O'Sullivan) Reservoirs. Both men resigned from the River Basin Surveys staff on September 24, having completed the preliminary reports on their field investigations for the season. On June 15, Mr. Daugherty was reappointed to the River Basin Surveys staff and was put in charge of the cooperative project arranged with the Department of Anthropology of the University of Washington. On June 19 he departed for the field with his crew and established a field camp in the Moses Lake area. At the end of the fiscal year he was still in the field in that location, Mr. Riddell was reappointed to the River Basin Surveys staff as field assistant on July 28 and departed with other members of the survey

crew to begin an investigation at Benham Falls Reservoir in eastern Oregon.

George L. Coale, archeologist, Harry S. Riddell, Jr., field assistant, and Douglas Osborne, field assistant, joined the staff of River Basin Surveys on June 28 and proceeded to Benham Falls Reservoir to begin the season's survey work there.

Albert D. Mohr and William S. King, who had assisted Clarence E. Smith during October and November, were employed by the River Basin Surveys temporarily as field assistants during the period May 16-21 to carry out an investigation of the Mariposa Reservoir basin on Mariposa Creek on the east side of the San Joaquin Valley in central California. Only three small sites were located and none were recommended for further investigation.

Cooperating institutions.—State and local institutions have contributed to the River Basin Surveys program in various ways. In addition to furnishing space for field offices and laboratories as at the University of Nebraska, the University of Texas, the University of Denver, Western State College, the University of California, and the University of Oregon, universities and local institutions in some cases have joined forces with the Surveys for cooperative projects and in others have taken over units in the survey program. As previously mentioned, the excavation project at the O'Sullivan Reservoir in Washington was a cooperative undertaking between the University of Washington and the River Basin Surveys. This also was true for the surveys in western Colorado where members of the Surveys staff worked with field parties from Western State College at Gunnison.

During the year the University of Kentucky made surveys at the Wolf Creek Reservoir on the Cumberland River, and at the Dewey Reservoir on Johns Creek in the Big Sandy River drainage. In addition, the University conducted excavations at the Wolf Creek Reservoir and furnished the River Basin Surveys with a detailed report on its activities. The University of Georgia established surveys in the Chattahoochee and Flint River basins and did some excavation work in areas which will be inundated. The Alabama Museum of Natural History did reconnaissance work and some digging. The Florida Park Service took over the survey of the area in Florida which will be flooded by the construction of the Woodruff Dam on the Apalachicola River near Chattahoochee. The University of Tennessee made a survey of the Stewarts Ferry Reservoir basin on Stones River and did preliminary reconnaissance at the Harpeth River project. It also made arrangements for some salvage work at the Center Hill Reservoir where the impounding of water began too soon for the River Basin Surveys to do more than make a reconnaissance and recommend the excavation of certain sites. The University of Missouri, in cooperation with the Missouri Archeological Society, made surveys

in the Bull Shoals, Clearwater, Pomme de Terre, Joanna, Table Rock, and Waco Reservoirs, and carried on excavations in key sites at Bull Shoals and Clearwater. The University of Oklahoma did some excavation work in a village site which will be flooded by the Fort Gibson Reservoir on the Grand (Neosho) River. The University of Kansas did survey work and started excavations at a village site in the Kanapolis River basin on the Smoky Hill River in Kansas. In Nebraska the State Historical Society carried on excavations at archeological sites in the Medicine Creek Reservoir area outside the Federally acquired lands adding important supplemental information on remains beyond the localities being worked by the River Basin Surveys. The Laboratory of Anthropology of the University of Nebraska excavated in two important sites in the Harlan County Reservoir area on the Republican River in the southern part of the State. The University of Nebraska State Museum carried on paleontological work near the Medicine Creek Dam site and on Lime Creek, a tributary of Medicine Creek, where important information was obtained on some of the earliest cultural remains thus far found in North America. The Museum also collected paleontological material from the Harlan County Reservoir. The University of North Dakota, in cooperation with the North Dakota Historical Society, carried on excavations at the Heart Butte Reservoir, on the Heart River, in the summer of 1947, and at the Baldhill Reservoir on the Sheyenne River beginning June 21, 1948. The University of Colorado made a preliminary reconnaissance of the 8 reservoir areas comprising the Colorado-Big Thompson project, while the University of Denver made brief surveys of 12 reservoir basins comprising the Blue-South Platte project. Western State College of Colorado did preliminary work in nine reservoir basins of the Gunnison-Arkansas project. The Museum of Northern Arizona, at Flagstaff, assumed responsibility for surveys at the Alamo project on Williams River in the western part of the State, but had not started investigations at the end of the year. The Archeological Surveys Association of Southern California, sponsored by a number of museums in that area, completed surveys in eight proposed reservoir and flood-control projects in that portion of the State. The University of California, at Berkeley, took over responsibility for the excavation of key sites located by the River Basin Surveys in the Pine Flat Reservoir on King's River and in the Isabella Reservoir on Kern River. Actual operations had not yet gotten under way, however, by June 30.

Progress reports and completed reports prepared by the cooperating organizations are sent to the River Basin Surveys so that the results of their investigations may be coordinated with the over-all

program. All the information obtained by these groups thus becomes a part of the general record of the River Basin Surveys.

EDITORIAL WORK AND PUBLICATIONS

There were issued 1 Annual Report, 2 Bulletin volumes (Handbook of South American Indians), and 4 Publications of the Institute of Social Anthropology as listed below:

Sixty-fourth Annual Report of the Bureau of American Ethnology, 1946-1947, 30 pp.

Bulletin 143. Handbook of South American Indians. Julian H. Steward, editor. Volume 3, The Tropical Forest tribes. 986 pp., 126 pls., 134 figs., 8 maps. Volume 4, The Circum-Caribbean tribes, 609 pp., 98 pls., 79 figs., 11 maps.

Institute of Social Anthropology Publ. No. 4. Cultural and historical geography of Southwest Guatemala, by Felix Webster McBryde. 184 pp., 48 pls., 2 figs., 25 maps.

Institute of Social Anthropology Publ. No. 5. Highland communities of Central Peru: A regional survey, by Harry Tschopik, Jr. 56 pp., 16 pls., 2 maps.

Institute of Social Anthropology Publ. No. 6. Empire's children: The people of Tzintzuntzan, by George M. Foster. 297 pp., 16 pls., 36 figs., 2 maps.

Institute of Social Anthropology Publ. No. 7. Cultural geography of the modern Tarascan area, by Robert C. West. 77 pp., 14 pls., 6 figs., 21 maps.

The following publications were in press at the close of the fiscal year:

Bulletin 143. Handbook of South American Indians. Julian H. Steward, editor. Volume 5, The comparative ethnology of South American Indians. Volume 6, Physical anthropology, linguistics, and cultural geography of South American Indians.

Institute of Social Anthropology Publ. No. 8. Sierra Popoluca speech, by Mary L. Foster and George M. Foster.

Institute of Social Anthropology Publ. No. 9. The Terena and the Caduveo of Southern Mato Grosso, Brazil, by Kalervo Oberg.

Institute of Social Anthropology Publ. No. 10. Nomads of the Long Bow: The Siriono of Eastern Bolivia, by Allan R. Holmberg.

Publications distributed totaled 25,037 as compared with 8,205 for the fiscal year 1947.

LIBRARY

Accessions in the library of the Bureau totaled 145 volumes, bringing the total accession record as of June 30, 1948, to 34,607.

ILLUSTRATIONS

Work on the restoration of Indian photographs consumed the greater part of the year. The rest of the time was spent on work for the editors and on the preparation of maps and illustrations for Bureau publications.

ARCHIVES

Ever-increasing use is being made of the manuscript and photographic collections of the Bureau. Cards for the manuscript catalog, compiled for publication, have been typed and assembled. Upon completion of this project, a similar catalog of the photographic negatives in the Bureau collection, was begun. Approximately 2,600 cards for this catalog were typed by the end of the fiscal year.

The Bureau also put into operation its new filing system of photographic prints, the first installment of 30 albums having been acquired for prints from newly restored negatives. Each print is labeled with information pertinent to the subject. Full biographical data is furnished where possible in the case of portraits, so that the information is easily accessible to inquirers. At the close of the fiscal year, approximately 200 new file prints have been thus filed. Prints for the duplicate reserve file also have been labeled and filed with protecting paper between the prints. Requests for pay orders exceeded 300 prints during the year.

Up to July 1, 1948, 200 restorations of old negatives were completed. This necessitated the making of 200 11- by 14-inch enlargements, 200 mountings, 200 8- by 10-inch negatives, and 600 8- by 10-inch file prints. In addition to the restoration program, the Bureau photographer filled requisitions for 53 negatives, 988 prints, and 807 enlargements.

COLLECTIONS

Collections transferred by the Bureau of American Ethnology to the United States National Museum during the fiscal year were as follows:

*Accession**No.**Collection*

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| 177,085. | 1 skeleton of an Indian child, 2-3 years old, from near Lela, Wheeler County, Tex. |
| 177,393. | 1 skull and 4 cervical vertebrae of a dinosaur. Collected by Dr. Theodore E. White 12½ miles west of Kaycee, Johnson County, Wyo. |
| 178,819. | Archeological material collected at Cerro de las Mesas, Veracruz, México, 1941, by the National Geographic Society-Smithsonian Institution Expedition under the direction of Dr. M. W. Stirling. |
| 178,831. | 3 Miocene specimens from the Canyon Ferry Reservoir area in Montana; and 6 Eocene specimens from the Boysen Reservoir area in Wyoming. Collected by Dr. T. E. White and John C. Donohoe. |
| 178,942. | 538 specimens of archeological material collected by Dr. Gordon R. Willey from the Center Hill Reservoir on Caney Fork River, DeKalb County, Tenn. |
| 179,088. | 2 mollusks from Medicine Creek, Nebr. |

MISCELLANEOUS

During the year Dr. Antonio J. Waring of Savannah, Ga., was made a collaborator of the Bureau of American Ethnology, while Miss Frances Densmore and Dr. John R. Swanton continued as collaborators.

During the course of the year information was furnished by members of the Bureau staff in reply to numerous inquiries concerning the American Indians, both past and present, of both continents. Various specimens sent to the Bureau were identified and data on them furnished for their owners.

Respectfully submitted.

M. W. STIRLING, *Director.*

Dr. A. WETMORE,

Secretary, Smithsonian Institution.

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